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NMR and NQR studies of superconducting CeTIn₅
(T = Co, Rh and Ir)

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We have carried out ¹¹⁵In and ⁵⁹Co nuclear quadrupole resonance (NQR) and nuclear magnetic resonance (NMR) measurements on CeTIn₅(T=Co, Rh and Ir). The temperature T and the pressure P dependence of nuclear spin-lattice relaxation rate $1/T_1$ of ¹¹⁵In in CeTIn₅ indicated that the superconductivity occurred nearby an antiferromagnetic instability. In the superconducting state, $1/T_1$ has no Hebel-Slichter coherence peak just below T_C and a power-law T dependence at very low temperatures, which indicates the existence of line nodes in the superconducting energy gap. The ¹¹⁵In (Ce-In plane) Knight shift in CeCoIn₅ decreases for both parallel and perpendicular directions to tetragonal c -axis below T_C , which shows the spin susceptibility decreases in all directions. These results indicate that CeTIn₅ (T = Co, Rh and Ir) exhibit non-s wave even parity (probably d -wave) superconductivity.